Office Action Summary	Application No.	Applicant(s)	
	10/801,531	MILLER ET AL.	
	Examiner	Art Unit	
	BRETT FEENEY	3624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03/10/2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. *03/23/2011* .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This **FINAL** Office action is in response to Applicant's submission received 03/10/2011.

Status of the Claims

2. Claim 1 was amended

3. No claims have been canceled.

4. Claims 19 and 20 are new.

5. Claims 1-18 are currently pending.

Response to Amendments

6. Applicant's amendments to the claims are herein acknowledged and entered. In response to Applicant's amendments the Examiner has maintained the rejections under §103.

Claim Rejections - 35 USC §103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. **Claims 1, 3, 4, 6, 7, 13, 14, 17 and 19 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Huang et al. US 5,953,707 (herein Huang) in view of Landvater US 6,609,101 (herein Landvater).

Claim 1

Huang discloses a computer implemented method of product ordering and inventory repositioning for a promotion in a supply chain management system utilizing a network (fig. 5, 12), comprising:

- *obtaining, during a current product sales promotion, via the network from a plurality of stores in a first region, each store associated with a respective distribution center within the first region, point of sale data for a first period of time less than a length of time allotted for a current product sales promotion* (FIG 12 and associated text in column 18, lines 45-67; noting "Demand History Data" "POS Data", "Market Data", "Promotion Data" "as well as top-down and bottom-up [(i.e. bottom-up is from lowest level of granularity which may represent a store, department, display within a department, etc.)] Forecast data." Further, see column 19, lines 1-7; noting "results of such an analysis [referring to analysis of present promotion)] are then used to help adjust forecasts to account for the promotions." Further see also column 20, lines 40-42; noting data may be broken down by product group, region, customer group, etc. Even further, see column 33, lines 8-15; noting each customer and vendor product is associated with a specified distribution network that includes a specific "warehouse", "distribution

center", "store" and other relevant data. Even further, see also column 79, lines 45-53; noting Huang discloses short-term, rolling horizon planning, which are plans "made frequently (even before the end of the previous planning horizons [(i.e. in the middle of a planned promotion]), thus taking into advantage updated information about demands and production capacities.");

- *causing, during the current product sales promotion, a computer calculation of a product demand level for stores associated with at least one distribution center for the current product sales promotion based on an outlook model and the point of sale data* (see column 18, lines 45-67; noting "[t]he SFP Module will then use Demand Orientation Data as well as other inputs e.g. Promotion and POS Data, to develop customer-centric bottom-up forecasts in Forecast Data." Further noting "Sales Promotion Analysis-The MDA Module reviews the demand history from POS Data and Demand History Data along with the customer promotion information from Promotion Data". Further, see column 19, lines 1-7; noting "the SFP and MDA Module can evaluate the quality of enterprise's forecasts and customer projections." Further, see also column 33, lines 8-15; noting the store data is associated with the distribution center which is assigned thereto. Further see column 79, lines 45-53; noting Huang discloses an exemplary calculation using a short-term, rolling horizon planning, which enables "taking into advantage updated information [i.e. POS data as noted *supra*] about demands and production capacities");

- *causing, during the current product sales promotion, a computer calculation of a product amount for the at least one distribution center based at least in part on the product demand level for stores associated with the at least one distribution center* (*id.* Further see column 19, lines 20-61; noting "customer specific sales forecast based on historical shipment to the customer, POS information at the customer location, and the customer's own forecast regarding future orders." Further, see column 79, lines 45-53 noting Huang discloses short-term, rolling horizon planning, which are plans "made frequently (even before the end of the previous planning horizons [includes the planned product demand level]), thus taking into advantage updated information about demands and production capacities.");
- *taking, during the current product sales promotion, an electronic action based on the product amount for the at least one distribution center* (see column 21, lines 65-67 and column 22, lines 1-56, forecast performance evaluations are exemplary electronic actions based on the product amount. Further noting planning future promotions is another electronic action. Further refining safety stock policies and generating different forecast matrices are additional exemplary electronic actions. Further see also column 79, lines 45 *et seq.*; noting the refined forecasts models and delivery plans are other exemplary electronic actions. Further noting that deliveries or non-deliveries may scheduled according to the changes in demand compared with the planned promotion.).

Huang teaches updating promotion forecasts, ordering and the like based on POS data and other data that pertains to adjusting a forecast. Huang does not explicitly recite causing, during the current product sales promotion, a calculation of a product demand level for the current product sales promotion based on an outlook model and the point of sale data nor wherein the product demand level is initially calculated based on point of sale data fro a earlier part of the current product sales promotion, and then the product demand level is revised based on point of sale data from a later part of the current product sales promotion *per se*.

In analogous art Landvater teaches during the current product sales promotion, a calculation of a product demand level for the current product sales promotion based on an outlook model and the point of sale data nor wherein the product demand level is initially calculated based on point of sale data from a earlier part of the current product sales promotion, and then the product demand level is revised based on point of sale data from a later part of the current product sales promotion (see column 5, lines 7-17; noting "determining time-phased product sales forecasts for a retail store supply chain using product sales data generated by retail stores in the chain and at least one of: by determining an initial projected sales amount for a product before a promotion for said product to account for increased demand as a result of said promotion; and by determining said projected sales for a product during a promotional period for said product on a daily basis using daily sales data generated during said promotional period for said product." Further, see also column 5, lines 31-49; noting "determining first projected replenishment shipments of products to retail stores in a retail store supply

chain by a first entity in the retail store supply chain using projected sales determined by a forecasting system and for determining second projected replenishment shipments of products to said first entity by a second entity in the retail store supply chain using said first projected replenishment shipments, further wherein said first projected replenishment shipments are determined by at least one of: by determining an initial projected sales amount for a product before a promotion for said product to account for increased demand as a result of said promotion; as a function of a safety stock levels for a product outside of promotional periods for such product and as a function of safety time levels for said product during promotional periods for such product; and by determining said first replenishment shipments during said promotional period on a daily basis using said daily projected sales for said promotional period determined by the forecasting system.").

It would have been obvious to a person having ordinary skill in the art, at the time of the invention, to combine the method of product ordering and inventory repositioning for a promotion in a supply chain management system utilizing a network of Huang with the step of during the current product sales promotion, calculating a product demand level for the current product sales promotion based on an outlook model and the point of sale data taught by Landvater because the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Claim 3

Huang/Landvater teaches the limitations above. Furthermore, Huang discloses:

- *wherein the outlook model is for the first region, and wherein the causing a computer calculation of a product demand level for stores associated with at least one distribution center is based at least in part on a product demand level for the stores in the first region for the current product sales promotion based on the outlook model and the point of sale data* (see FIG 9 and associated text; no0ting that specific components are related to distribution centers. Further see FIG 12 and associated text; noting the Promotion Data and Demand Information are fed into the MDA and SF&P modules. Further noting; the "Distribution Network: Define the customer as well as the vendor's product distribution networks that are relevant to the VMR program. It identifies which product is being distributed from which vendor warehouse and which customer Distribution Center (or store) are assigned to each warehouse. Distribution Center (DC) Profile: Define the main attributes of a customer DC or a vendor warehouse including its location (city and state) information." Further, see FIG 14 and associated text; noting Promotion and POS Data are input into the demand module wherein the Demand module reconciles historical orders and incoming data. Further, see FIG 52 and associated text; noting data domains include regions such as the exemplary "east coast customers" domains shown and described. Even further, see FIG 59 and associated text; noting promotion plans are broken down by product type, class, etc. and customers are grouped by top

sellers, bottom sellers and "region". Further, see also column 33, lines 8-15; noting each customer and vendor product is associated with a specified distribution network that includes a specific "warehouse", "distribution center", "store" and other relevant data.).

Claim 4

Huang/Landvater teaches the limitations above. Furthermore, Huang discloses wherein the causing, during the current product sales promotion, a computer calculation of a product demand level for stores associated with at least one distribution center comprises:

- *causing, during the current product sales promotion, a computer calculation of a product demand level for stores associated with one distribution center for the current product sales promotion based on the outlook model and on point of sale data for the short period of time obtained from at least one store associated with the one distribution center* (*id.* Noting historical and POS data associated with stores which are associated with DCs are updated and reconciled to determines affects of the promotion on demand. Further noting “Sales Promotion Analysis--The MDA Module 134 reviews the demand history from POS Data 138 and Demand History Data 136 along with the customer promotion information from Promotion Data 142 to analyze the impact of promotions on sales. The results of such an analysis are then used to help adjust sales forecasts to account for promotions. Forecast Performance Evaluation--Using Demand Orientation Data

146, Demand History Data 136 and Promotion Data 142, the SFP 132 and MDA Module 134 can evaluate the quality of enterprise's forecasts and the customer projections." Further, see also FIG 31 and associated text; noting the "impact of sales promotion" is determined. Further noting "[l]ink POS data, where available, to the historical promotion information to analyze the real impact of promotion activities on demand, as opposed to relying on the estimates provides by the retailers.").

Claim 6

Huang/Landvater teaches the limitations above. Furthermore, Huang discloses:

- *wherein the product demand level calculated for the stores in the first region includes a demand level for stores for which no point of sale data has been obtained in the current product promotion* (see column 19, lines 31-57; noting top-down forecasting does not use POS data. Further, retailer based estimates (as noted *supra*) do not use POS data as well.).

Claim 7

Huang/Landvater teaches the limitations above. Furthermore, Huang discloses wherein the causing a computer calculation of a product demand level for stores associated with at least one distribution center comprises:

- *causing a computer calculation of a product demand level for stores associated with one distribution center for the current product sales promotion based on the*

outlook model and on point of sale data for the first period of time obtained from at least one store associated with the one distribution center (*id.* at **Claim 4**; Noting historical and POS data associated with stores which are associated with DCs are updated and reconciled to determines affects of the promotion on demand. Further noting “Sales Promotion Analysis--The MDA Module 134 reviews the demand history from POS Data 138 and Demand History Data 136 along with the customer promotion information from Promotion Data 142 to analyze the impact of promotions on sales. The results of such an analysis are then used to help adjust sales forecasts to account for promotions. Forecast Performance Evaluation--Using Demand Orientation Data 146, Demand History Data 136 and Promotion Data 142, the SFP 132 and MDA Module 134 can evaluate the quality of enterprise's forecasts and the customer projections.” Further, see also FIG 31 and associated text; noting the "impact of sales promotion" is determined. Further, see also column 14, lines 5-19; noting VMR determines the amount of inventory that will be necessary are all relevant points of the supply chain including sotres associated with the DCs in order to meet customer needs and maintain contractual agreements. Further see also FIGS 17 and 20; noting inventories for production plans, required components, potential capacity, SLAs, status and the like are accounted for in PDI Planning. Further, see column 68, lines 54-67; noting the model performs a calculation of required inventories for each echelon of the supply chain.).

Claim 13

Huang/Landvater teaches the limitations above. Furthermore, Huang discloses:

- *causing a computer calculation of a product component amount for the at least one distribution center based on the product amount for the at least one distribution center and a component file listing the product components of the product* (see FIGS 16-18; noting forecasting of components is included as part of supply chain management. Further see also FIG 66, 68, 70; noting listing of product components. Further see column 24, lines 54-64; noting production requirements and component availability are based on sales plan.).

Claim 14

Huang/Landvater teaches the limitations above. Furthermore, Huang discloses:

- *causing a computer calculation of a product inventory needed at the at least one distribution center based at least in part on the product amount for the at least one distribution center, and product inventory within the supply chain and accessible by the at least one distribution center or the stores associated with the at least one distribution center* (see column 14, lines 5-19; noting VMR determines the amount of inventory that will be necessary are all relevant points of the supply chain in order to meet customer needs and maintain contractual agreements. Further see also FIGS 17 and 20; noting inventories for production plans, required components, potential capacity, SLAs, status and the like are accounted for in PDI Planning. Further, see column 68, lines 54-67; noting the

model performs a calculation of required inventories for each echelon of the supply chain.).

Claim 17

Huang/Landvater teaches the limitations above. Furthermore, Huang discloses:

- *wherein the electronic action comprises repositioning inventory or generating a purchase order for additional products based at least in part on the product inventory needed* (*id.* at **Claim 1**. Further see "Replenishment Order Generation" noting "the main objective of the functionality is to provide the user with an initial set of replenishment quantities for a set of products with the consideration of the sell-through forecasts as well as VMR specific operating parameters. The quantities will then be approved by the user and converted into actual purchase orders.").

Claim 19 recites limitations that are substantially similar to Claims 1 and 13 above. Therefore, Claim 19 is rejected under the same rational.

9. **Claims 2, 8-12 and 20 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Huang; in view of Landvater; further in view of Sheldon et al. US 5,765,143 (herein Sheldon).

Claim 2

Huang/Landvater teaches the limitations above. Furthermore, Huang discloses:

- *obtaining via the network from multiple distribution centers in the supply chain historical invoice data, the historical invoice data indicative of products ordered for historical product sales promotions from the distribution centers by stores associated with the respective different distribution centers* (see FIGS 5 and 12 and associated text *inter alia* column 18, lines 64-67, col. 19, lines 1-3; noting the customer demand history and "customer promotion information from Promotion Data to analyze the impact of promotions on sale.").

Huang discloses using “regression models” and other conventional mathematical operations including “[c]ompute and analyze correlation between the demand for different product groups.” Further, Huang discloses performing “Correlation Analysis Among Product Families”; “several basic time series models is applied to identify trend factors, seasonality indices and/or auto correlation structures”; and “correlation coefficient for a given pair of time series with properly defined time periods”. Huang/Landvater does not explicitly recite, however in analogous art Sheldon teaches:

- *causing a computer determination of correlations among multiple distribution centers based on the historical invoice data, and indicating that a predictor/predictee relationship exists between pairs of the distribution centers if the pair of distribution centers exhibits at least a predetermined correlation* (see column 8, lines 57-63; noting statistical correlation of sales between stores is predictor/predictee relationship, predetermined correlation is applied.); *and*

- *causing a computer calculation of a predictor/predictee index value for the predictor/predictee pairs based on the historical invoice data, where the predictor/predictee index value indicates the ratio of the product sales volume for stores in the predictee distribution center to the product sales volume for stores in the predictor distribution center determined based on the historical product invoice data* (see column 8, lines 34-63; noting statistical correlation of sales between stores is predictor/predictee relationship, weighting factor is equivalent of index value.).

It would have been obvious to a person having ordinary skill in the art, at the time of the invention, to combine the method of product ordering and inventory repositioning for a promotion in a supply chain management system utilizing a network of Huang/Landvater with the step of calculating a predictor/predictee index value taught by Sheldon because the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Claim 8

Huang/Landvater teaches the limitations above. Furthermore, Huang discloses wherein the causing, during the current product sales promotion, a computer calculation of a product demand level for stores associated with at least one distribution center comprises:

- *causing a computer calculation of a product demand level for the stores associated with a first distribution center for the current product sales promotion based on the outlook model and on point of sale data for the first period of time obtained from at least one store associated with the first distribution center* (see FIG 12 and associated text *inter alia* column 18, lines 45-67, col. 19, lines 1-7; noting POS data, historical data and customer projections are receives and leveraged to create a forecast. Further see also column 20, lines 40-42; noting association between region, product groups, etc. are made and factored into the forecast model. Further see also column 33, lines 8-15; noting the Distribution network and associations are used for supply planning. In further support of the Examiner's position, the Examiner notes Landavater also discloses in FIGS 1 and 2 and associated text; "Retail store 23 can be a "bricks and mortar" store of any size or type, e.g., a small general store or a large "warehouse" store of a national chain. In addition, retail store 23 may be a so-called "clicks and bricks" store in which products are purchased on-line from a traditional store. Further, retail store 23 may be a pure e-commerce organization. Supplier 24 could be any one of the following facilities: a retail supplier, a satellite supplier, a retail depot, a wholesaler, an independent distributor, a manufacturer's supplier, or a manufacturer's plant. Manufacturer 25 could be any one of the following facilities: a manufacturer's distribution center, a wholesaler, an independent distributor, a manufacturer's supplier, or a manufacturer's plant. For purposes of illustration, this third level in the supply chain will be generally referred to as manufacturer

25, recognizing that this level could be any of a number of different types of facilities, depending on the supply chain for a particular product. For example, a weight set might be stocked at retail store 23, and the store supplied by supplier 24 that is a retail distribution center (level 2) and the retail distribution center supplied by a manufacturer 25 that is a manufacturing plant (level 3). In another situation, this weight set might be supplied to retail store 23 by a supplier 24 that is a retail cross-dock distribution center (level 2) and the retail cross-dock distribution center is supplied by a manufacturer 25 that is a manufacturer's distribution center (level 3), and the manufacturer's distribution center is supplied by a manufacturing plant (level 4, not shown on the diagram). In a third situation, the weight set at retail store 23 might be supplied by supplier 24 that is an independent distributor (level 2), and the independent distributor is supplied by a manufacturer 25 that is a manufacturing plant (level 3). There are any number of other permutations of this supply chain, each of which may be appropriate to the distribution of a particular product to a retail store or stores.").

Huang/Landvater does not explicitly recite, however in analogous art Sheldon teaches:

- *when a predictor/predictee relationship exists between the first distribution center and a second distribution center, causing a computer calculation of a product demand level for the stores in the second distribution center for the current product sales promotion based on the product demand level calculated for the first distribution center and a predictor/predictee index value for the first and*

second distribution centers (see column 8, lines 3-63; noting statistical correlation of sales between stores is predictor/predictee relationship, weighting factor is equivalent of index value. In further support, note "[e]ach weighting factor W.sub.j is determined by measures of similarity (to store A) based on sales activity, market information, inventory information, and/or customer demographics (such as vehicle population) regarding each store in the population. Similarity between store A and each store in the population is determined by one or more of the following factors: geographic proximity; statistical correlation of the sales of parts; common attributes of the customer base (or percent of sales to different categories of customers, such as wholesale and retail customers); and demographics of the stores' market areas.").

It would have been obvious to a person having ordinary skill in the art, at the time of the invention, to combine the method of product ordering and inventory repositioning for a promotion in a supply chain management system utilizing a network of Huang/Landvater with the step of calculating a predictor/predictee index value taught by Sheldon because the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Claim 9

Huang/Landvater does not explicitly recite, however in analogous art Sheldon teaches:

- *wherein the product demand level for the stores in the second distribution center is calculated to be the product demand level for the stores in the first distribution center multiplied by the predictor/predictee index* (see column 8, lines 3-63; noting statistical correlation of sales between stores is predictor/predictee relationship, weighting factor is equivalent of index value. Further *id.* at **Claim 8**.).

It would have been obvious to a person having ordinary skill in the art, at the time of the invention, to combine the method of product ordering and inventory repositioning for a promotion in a supply chain management system utilizing a network of Huang/Landvater with the step of calculating a predictor/predictee index value taught by Sheldon because the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Claim 10,

The Examiner respectfully notes that "only when" is intended use language and does not modify and of the steps or results of the method, only when the method is performed. Thus, it will not patentably distinguish the claimed invention from the prior art. However in an effort to advance prosecution:

Huang/Landvater does not explicitly recite, however in analogous art Sheldon teaches:

- *wherein the causing a computer calculation of a product demand level for the stores in the second distribution center is performed only when point of sale data has not been obtained during the current product sales promotion for one or more stores associated with the second distribution center* (see column 8, lines 3-63, statistical correlation of sales between stores is predictor/predictee relationship, weighting factor is equivalent of index value. Further *id.* at **Claim 8**. Further noting that the calculations may be performed based on historical data only where POS is not useful or available as noted in Huang *supra*.).

It would have been obvious to a person having ordinary skill in the art, at the time of the invention, to combine the method of product ordering and inventory repositioning for a promotion in a supply chain management system utilizing a network of Huang/Landvater with the step of determining a correlation between DCs taught by Sheldon because the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Claim 11

Huang teaches collecting historical invoice data from at least one historical product sales promotion (see FIG 12 and text in column 18, lines 64-67, col. 19, lines 1-

7; noting demand history data is historical invoice data). Huang/Landvater does not explicitly recite however in analogous art Sheldon teaches wherein the determination of the correlation between the first distribution center and the second distribution center is based on historical invoice data (see column 8, lines 52-63) Further *id.* at **Claim 8**.).

It would have been obvious to a person having ordinary skill in the art, at the time of the invention, to combine the method of product ordering and inventory repositioning for a promotion in a supply chain management system utilizing a network of Huang/Landvater with the step of determining a correlation between DCs taught by Sheldon because the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Claim 12

The Examiner respectfully notes that "when point of sale…current product sales promotion" is intended use language and does not modify and of the steps or results of the method, only when the method is performed. Thus, it will not patentably distinguish the claimed invention from the prior art.

Huang teaches wherein the causing a computer calculation of a product demand level for stores associated with at least one distribution center comprises:

- when point of sale data has not been obtained during the current product sales promotion for a threshold number of stores associated with one distribution

center and when there is no predictor/predictee relationship between the one distribution center and any of the distribution centers for which point of sale data has been obtained for the threshold number of stores during the current product sales promotion, causing a calculation of a product demand level of stores associated with the one distribution center based on historical invoice data for the one distribution center and the outlook model (FIG 12, col. 18, lines 45-67, col. 19, lines 1-7, 31-57; noting the forecasting model may be made simply on historical invoice data when other data is not available. Further *id.* at **Claim 1**; noting POS data is used "when available" therefore the converse is true such that when it is not available it will not be used. Further noting "Min-Max" data policies are applied and exception thresholds may also be used.).

Claim 20 recites limitations that are substantially similar to Claims 1, 8 and 9 above. Therefore, Claim 20 is rejected under the same rational.

10. **Claim 5, 15 and 16 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Huang; in view of Landvater; further in view of **Official Notice**.

Claim 5

Huang/Landvater does not expressly disclose wherein the calculation of the average product demand level per day for the stores associated with the one distribution center comprises multiplying a per day average product demand level over

the short period of time for an average store associated with the one distribution center by the per day average product demand level over the promotion for an average store within the first region, and dividing by the per day average product demand level for the average store within the first region over the short period of time (i.e. the ratio of average demand per day in a DC to a region in the short term is equal to the ratio of average demand per day in a DC to a region in a longer time period).

Official notice was previously given, not timely traversed and is therefore admitted that forecasting demand using ratios of smaller sample sizes to larger sample sizes is old and well-known.

All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions. The claimed invention is merely a combination of old and well-known elements, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. Thus, it would have been obvious to combine the teachings, motivated by the advantages of simplicity and smaller data sets by forecasting demand using ratios.

Claim 15,

Huang/Landvater does not expressly teach wherein the electronic action comprises displaying electronically the product inventory needed in an alert message. Official notice was previous taken, not timely traversed and is therefore admitted that

wherein the electronic action comprises displaying electronically the product inventory needed in an alert message is old and well-known.

All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions. The claimed invention is merely a combination of old and well-known elements, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. Thus, it would have been obvious to combine the teachings, motivated by the advantage of quickly conveying important inventory information.

Claim 16

Huang/Landvater does not expressly teach wherein the electronic action comprises displaying electronically the product inventory needed in an alert message. Official notice was previous taken, not timely traversed and is therefore admitted that wherein the electronic action comprises posting the product inventory needed to a website is old and well-known.

All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions. The claimed invention is merely a combination of old and well-known elements, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. Thus, it would have been

obvious to combine the teachings, motivated by the advantage in increased accessibility to important inventory information.

11. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang; in view of Landvater; further in view of Schroeder et al. US 2003/0130883 (herein Schroeder).

Claim 18

Huang/Landvater does not explicitly recite, however in analogous art Schroeder teaches wherein the outlook model is for a first product, and further comprising:

- causing a computer calculation of a second product change index based on historical point of sale data for a second product (see ¶¶ 83, 84; noting cross-elasticity is equivalent of second product change index, par. 92, 93);
- causing, during the current product sales promotion, a computer calculation of a product demand level for the second product for the stores associated with the at least one distribution center for the current product sales promotion based on an outlook model for the second product, the second product change index, and point of sale data obtained during the current promotion (see ¶¶ 83, 84, cross-elasticity is equivalent of second product change index, par. 92, 93).

It would have been obvious to a person having ordinary skill in the art, at the time of the invention, to combine the method of product ordering and inventory repositioning for a promotion in a supply chain management system utilizing a network

of Huang/Landvater with the product change index taught by Shroeder because the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Response to Arguments

12. Applicant's arguments received on 03/10/2011 have been fully considered but they are not persuasive. Applicants argues:

i) Huang/Landvater does not teach calculating a product amount at the distribution center level during the promotion, and then revising the product demand level for a later part of the promotion.

ii) Sheldon does not teach calculating a product demand level based on a predictor/predictee relationship between two entities.

In response to argument i) that Huang/Landvater does not teach calculating a product amount at the distribution center level during the promotion, and then revising the product demand level for a later part of the promotion, the Examiner respectfully disagrees. Huang discloses POS data, historical data and customer projections are receives and leveraged to create a forecast and associations between region, product groups, etc. are made and factored into the forecast model. Further Huang discloses performing the forecasting method for a Distribution network where the associations are

used for supply planning. Further, the Examiner respectfully disagrees with Applicant's characterization of Landvater. In contraposition, to Applicant's assertion that Landvater does not teaches calculating product demand at the distribution center level, and in further support of the Examiner's position, the Examiner notes Landavater discloses in FIGS 1 and 2 and associated text; "Retail store 23 can be a "bricks and mortar" store of any size or type, e.g., a small general store or a large "warehouse" store of a national chain. In addition, retail store 23 may be a so-called "clicks and bricks" store in which products are purchased on-line from a traditional store. Further, retail store 23 may be a pure e-commerce organization. Supplier 24 could be any one of the following facilities: a retail supplier, a satellite supplier, a retail depot, a wholesaler, an independent distributor, a manufacturer's supplier, or a manufacturer's plant. Manufacturer 25 could be any one of the following facilities: a manufacturer's distribution center, a wholesaler, an independent distributor, a manufacturer's supplier, or a manufacturer's plant. For purposes of illustration, this third level in the supply chain will be generally referred to as manufacturer 25, recognizing that this level could be any of a number of different types of facilities, depending on the supply chain for a particular product. For example, a weight set might be stocked at retail store 23, and the store supplied by supplier 24 that is a retail distribution center (level 2) and the retail distribution center supplied by a manufacturer 25 that is a manufacturing plant (level 3). In another situation, this weight set might be supplied to retail store 23 by a supplier 24 that is a retail cross-dock distribution center (level 2) and the retail cross-dock distribution center is supplied by a manufacturer 25 that is a manufacturer's distribution center (level 3), and the

manufacturer's distribution center is supplied by a manufacturing plant (level 4, not shown on the diagram). In a third situation, the weight set at retail store 23 might be supplied by supplier 24 that is an independent distributor (level 2), and the independent distributor is supplied by a manufacturer 25 that is a manufacturing plant (level 3). There are any number of other permutations of this supply chain, each of which may be appropriate to the distribution of a particular product to a retail store or stores." Further, as noted in **Claim 1** *supra* Landvater teaches "determining time-phased product sales forecasts for a retail store supply chain using product sales data generated by retail stores in the chain and at least one of: by determining an initial projected sales amount for a product before a promotion for said product to account for increased demand as a result of said promotion; and by determining said projected sales for a product during a promotional period for said product on a daily basis using daily sales data generated during said promotional period for said product." Further, Landvater teaches "determining first projected replenishment shipments of products to retail stores in a retail store supply chain by a first entity in the retail store supply chain using projected sales determined by a forecasting system and for determining second projected replenishment shipments of products to said first entity by a second entity in the retail store supply chain using said first projected replenishment shipments, further wherein said first projected replenishment shipments are determined by at least one of: by determining an initial projected sales amount for a product before a promotion for said product to account for increased demand as a result of said promotion; as a function of a safety stock levels for a product outside of promotional periods for such product and

as a function of safety time levels for said product during promotional periods for such product; and by determining said first replenishment shipments during said promotional period on a daily basis using said daily projected sales for said promotional period determined by the forecasting system." Therefore, Huang/Landvater does teach calculating a product amount at the distribution center level during the promotion, and then revising the product demand level for a later part of the promotion. Accordingly, the Examiner has maintained the rejection under §103.

In response to argument ii) that Sheldon does not teach calculating a product demand level based on a predictor/predictee relationship between two entities, the Examiner respectfully disagrees. Sheldon teaches when a predictor/predictee relationship exists between the first distribution center and a second distribution center, a computer calculation of a product demand level for the stores in the second distribution center for the current product sales promotion is based on the product demand level calculated for the first distribution center and a predictor/predictee index value for the first and second distribution centers where statistical correlation of sales between stores is predictor/predictee relationship and the weighting factor is equivalent of index value. Further Sheldon teaches that "[e]ach weighting factor W.sub.j is determined by measures of similarity (to store A) based on sales activity, market information, inventory information, and/or customer demographics (such as vehicle population) regarding each store in the population. Similarity between store A and each store in the population is determined by one or more of the following factors: geographic proximity; statistical correlation of the sales of parts; common attributes of the customer

base (or percent of sales to different categories of customers, such as wholesale and retail customers); and demographics of the stores' market areas." Further, as noted *supra* Huang/Landavater teaches that the entities represented may be particular promotions, distribution centers, stores or similar modeled entities. Therefore, the combination of Huang/Landavater/Sheldon teaches calculating a product demand level based on a predictor/predictee relationship between two entities. Therefore the Examiner has maintained the rejection under §103.

Conclusion

The references cited in the form PTO-892 were not applied under relevant sections of §102 or §103 in the above Office action, however they are considered relevant to both claimed and unclaimed features of the instant invention. Applicant is herein advised to review the cited prior art references prior to responding to the instant Office action in order to expedite prosecution of the instant application.

THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to **BRETT FEENEY** whose telephone number is **571.270.5484.** The Examiner can normally be reached on Monday-Thursday, 7:30am-6:30pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **Lynda Jasmin** can be reached at **571.272.6782**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://portal.uspto.gov/external/portal/pair . Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to **571-273-8300**.

Hand delivered responses should be brought to the **United States Patent and Trademark Office Customer Service Window**:

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Alexandria, VA 22314.

/BRETT FEENEY/

Examiner, Art Unit 3624

/LYNDA C JASMIN/
Supervisory Patent Examiner, Art Unit 3624